

CLAIMS

What is claimed is:

1 1. A snap ring, comprising:
2 a ring with an interior contour that extends about an
3 opening and has a first interior edge bordering a first face of
4 the snap ring and a second interior edge bordering a second face
5 of the snap ring, the first interior edge having a cross-
6 sectional profile that includes die roll, and the second
7 interior edge having a cross-sectional profile that is blunted.

1 2. The snap ring of claim 1, wherein said blunted cross-
2 sectional profile is a rounded profile at least at a point
3 within a region of the interior contour where contact with
4 another solid object occurs during installation of the snap
5 ring.

1 3. The snap ring of claim 1, wherein said blunted cross-
2 sectional profile is a beveled profile at least at a point
3 within a region of the interior contour where contact with
4 another solid object occurs during installation of the snap
5 ring.

1 4. The snap ring of claim 2, wherein said rounded profile
2 is characterized by a radius of curvature that is chosen to be
3 in the design range of 40% to 85% of the thickness of the snap
4 ring.

1 5. The snap ring of claim 3, wherein said beveled profile
2 is characterized by a bevel angle that is chosen to be in the
3 design range of 10 to 40 degrees from the vertical axis.

1 6. The snap ring of claim 3, wherein said beveled profile
2 is characterized by a bevel depth that is chosen to be in the
3 design range of 60% to 85% of the thickness of the snap ring.

1 7. An actuator arm assembly for an information storage
2 device, comprising:
3 an actuator; and
4 an actuator pivot bearing; and
5 a snap ring retaining the actuator pivot bearing relative
6 to the actuator, the snap ring having an interior contour that
7 extends about an opening and has a first interior edge bordering
8 a first face of the snap ring and a second interior edge
9 bordering a second face of the snap ring, the first interior
10 edge having a cross-sectional profile that includes die roll,
11 and the second interior edge having a cross-sectional profile
12 that is blunted.

1 8. The actuator arm assembly of claim 7, wherein said
2 blunted cross-sectional profile is a rounded profile at least at
3 a point within a region of the interior contour where contact
4 with another solid object occurs during installation of the snap
5 ring.

1 9. The actuator arm assembly of claim 7, wherein said
2 blunted cross-sectional profile is a beveled profile at least at
3 a point within a region of the interior contour where contact
4 with another solid object occurs during installation of the snap
5 ring.

1 10. The actuator arm assembly of claim 8, wherein said
2 rounded profile is characterized by a radius of curvature that
3 is chosen to be in the design range of 40% to 85% of the
4 thickness of the snap ring.

1 11. The actuator arm assembly of claim 9, wherein said
2 beveled profile is characterized by a bevel angle that is chosen
3 to be in the design range of 10 to 40 degrees from the vertical
4 axis.

1 12. The actuator arm assembly of claim 9, wherein said
2 beveled profile is characterized by a bevel depth that is chosen
3 to be in the design range of 60% to 85% of the thickness of the
4 snap ring.

1 13. A method to manufacture a snap ring, comprising:
2 stamping an interior contour that extends about an opening,
3 forming a blunted cross-sectional profile on an edge
4 opposite an edge having die roll caused by said stamping.

1 14. The method of claim 13 wherein said forming a blunted
2 cross-sectional profile comprises coining a rounded cross-
3 sectional profile.

1 15. The method of claim 13 wherein said forming a blunted
2 cross-sectional profile comprises coining a beveled cross-
3 sectional profile.

1 16. A method for assembling an actuator arm assembly in an
2 information storage device, comprising:
3 fabricating a snap ring, wherein said fabricating includes
4 stamping an interior contour that extends about an opening, and
5 forming a blunted cross-sectional profile on an edge opposite an
6 edge having die roll caused by said stamping; and
7 installing the snap ring onto an actuator pivot bearing.

1 17. The method of claim 16 wherein said installing
2 includes contact between the snap ring and another solid object
3 in at least one contacting region along the interior contour.

1 18. The method of claim 17 wherein said solid object
2 includes an installation cone having a cylindrical cross-
3 section.

1 19. The method of claim 17 wherein said forming a blunted
2 cross-sectional profile comprises coining a rounded cross-
3 sectional profile at least in said contacting region.

1 20. The method of claim 17 wherein said forming a blunted
2 cross-sectional profile comprises coining a beveled cross-
3 sectional profile at least in said contacting region.